2010-10-22 Friday Morning Notes

Friday, October 22, 2010
6:00 AM

On-call

- Friday: Keith Gollwitzer
- Saturday: Tony Leveling
- Sunday: Dave Vander Muelen

Stacking

- <stacking rate>=23.2 mA/hr
- <production>= 20.8 pbar/E6 protons
- <POT>=8.5 Tp

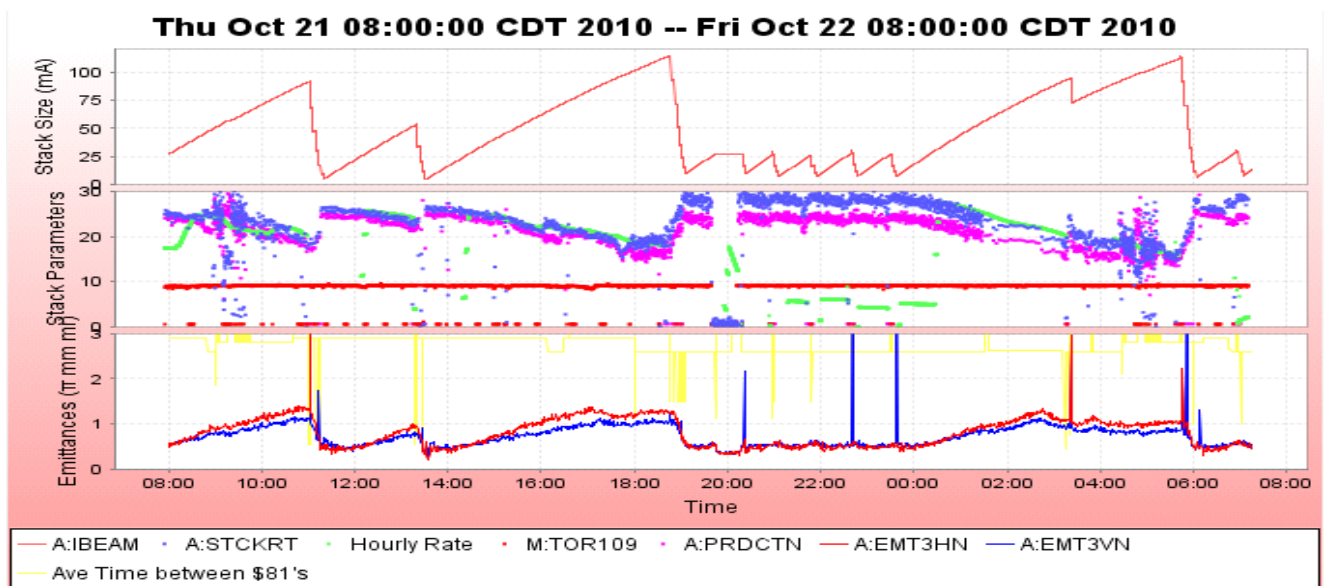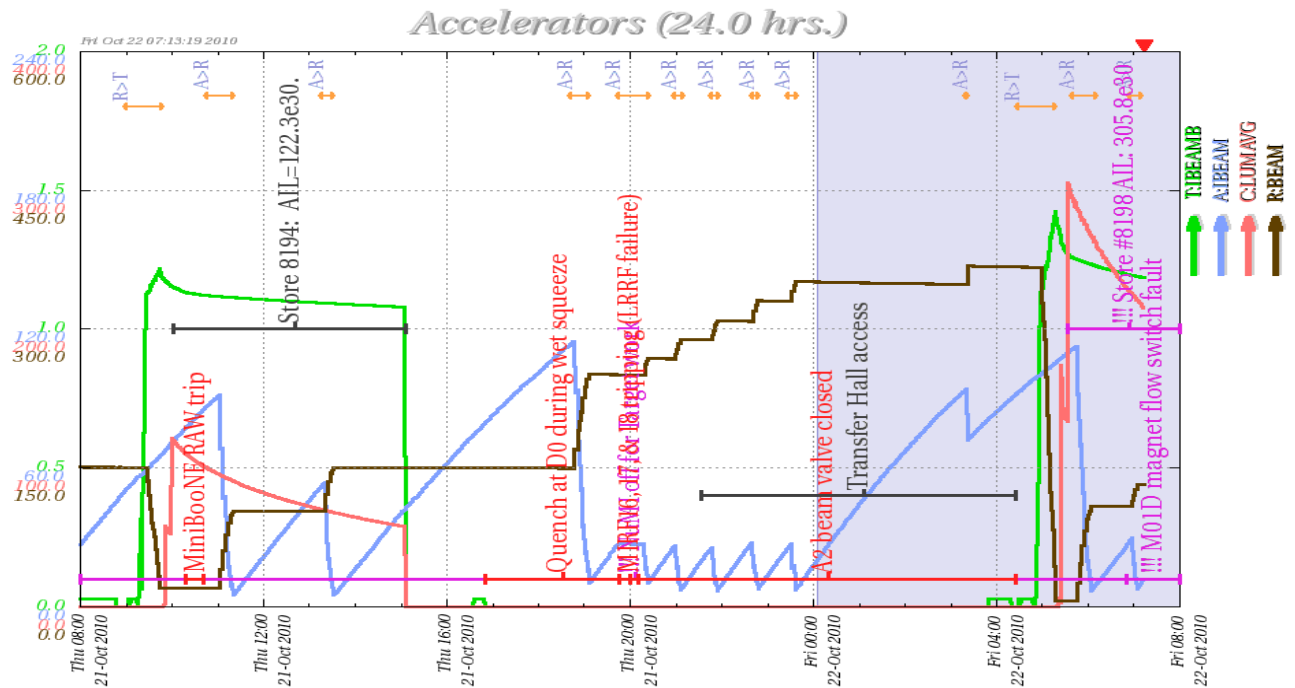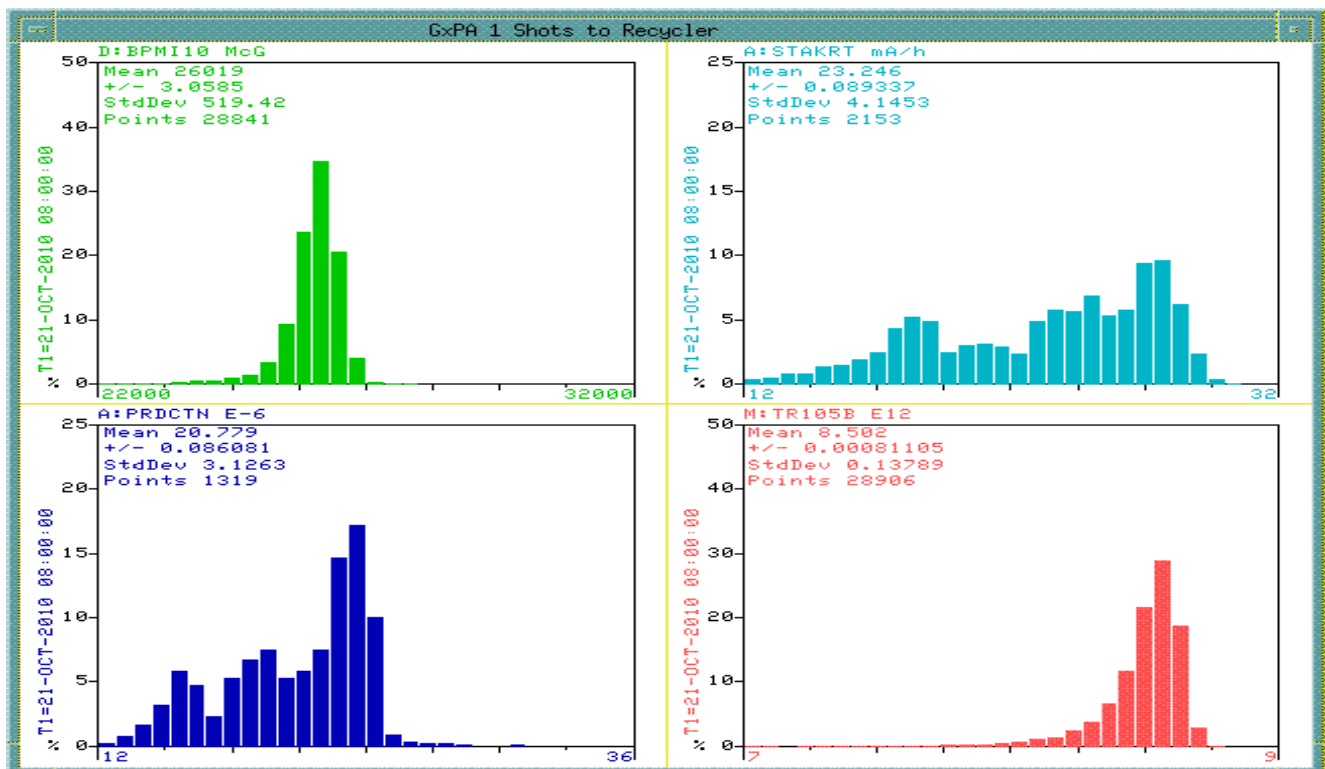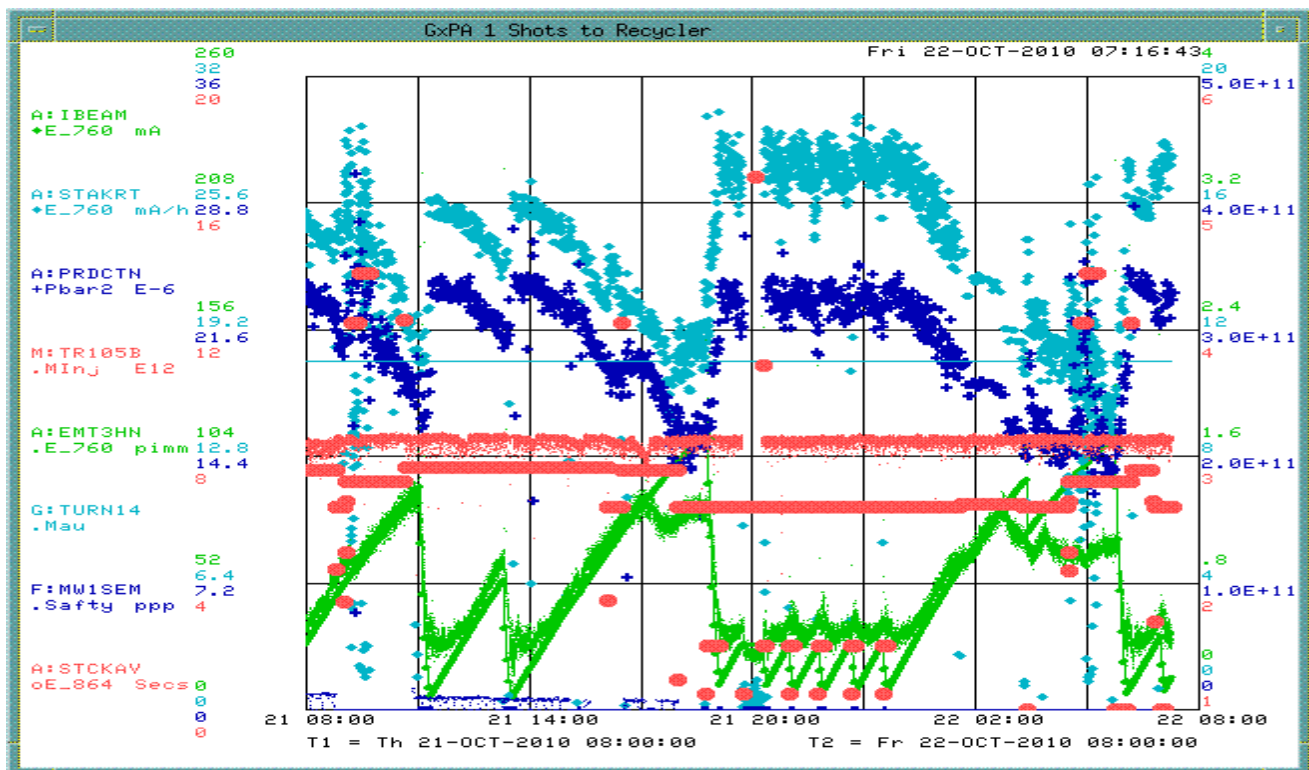## Transfers

- A10 BPM house not healthy
- Unstacked 520e10
- Average efficiency = 93.6%
- Take out the big stack transfers = 96.6%

The Numbers

- Dailey
- Weekly
    - Stacking
        - Pbars stacked: 3385.89 E10
        - Time stacking: 143.47 Hr
        - Average stacking rate: 23.60 E10/Hr

    - Uptime
        - Number of pulses while in stacking mode: 184858
        - Number of pulses with beam: 173394
        - Fraction of up pulses was: 93.80%

    - The uptime's effect on the stacking numbers
        - Corrected time stacking: 134.58 Hr
        - Possible average stacking rate: 25.16 E10/Hr
        - Could have stacked: 3609.75 E10/Hr

    - Recycler Transfers
        - Pbars sent to the Recycler: 3370.92 E10
        - Number of transfers : 397
        - Number of transfer sets: 128
        - Average Number of transfer per set: 3.10
        - Time taken to shoot including reverse proton tuneup: 01.39 Hr
        - Transfer efficiency: 95.69%

    - Other Info
        - Average POT : 8.35 E12
        - Average production: 23.37 pbars/E6 protons

    - * Red indicates a problem during data retrieval. See the message window for details.

The Daily Plots

Accelerators (24.0 hrs.)

Fri Oct 22 07:13:19 2010

Store 8194: A:L=122.3e30.

MiniBooNE RAW trip

Quench at D0 during wet squeeze

M:IRNVG diff & L8 turning (LRRF failure)

A2 beam valve closed

Transfer Hall access

!!! Store #8198 A:L: 305.8e30.

!!! M01D magnet flow switch fault

T:IBEAMB
A:IBEAM
C:LUMAVG
R:BEAM

Thu Oct 21 08:00:00 CDT 2010 -- Fri Oct 22 08:00:00 CDT 2010

- A:IBEAM · A:STCKRT · Hourly Rate · M:TOR109 · A:PRDCTN — A:EMT3HN — A:EMT3VN
- Ave Time between $81's

GxPA 1 Shots to Recycler

Fri 22-OCT-2010 07:16:43

A:IBEAM
◆E_760 mA

A:STAKRT 208
◆E_760 mA/h 25.6
28.8
16

A:PRDCTN
+Pbar2 E-6 156
19.2
21.6
M:TR105B 12
.MInj E12

A:EMT3HN 104
.E_760 pimm 12.8
14.4
8

G:TURN14
.Mau

52
6.4
F:MW1SEM 7.2
.Safty ppp 4

A:STCKAV
oE_864 Secs 0
0
0
0
0

260
32
36
20

20
16
6
5.0E+11

3.2
4.0E+11
5

2.4
3.0E+11
4

1.6
2.0E+11
3

.8
1.0E+11
2

0
0
0
1

21 08:00   21 14:00   21 20:00   22 02:00   22 08:00

T1 = Th 21-OCT-2010 08:00:00   T2 = Fr 22-OCT-2010 08:00:00

GxPA 1 Shots to Recycler

D:BPMI10 McG
Mean 26019
+/- 3.0585
StdDev 519.42
Points 28841

T1=21-OCT-2010 08:00:00

22000   32000

A:STAKRT mA/h
Mean 23.246
+/- 0.089337
StdDev 4.1453
Points 2153

T1=21-OCT-2010 08:00:00

12   32

A:PRDCTN E-6
Mean 20.779
+/- 0.086081
StdDev 3.1263
Points 1319

T1=21-OCT-2010 08:00:00

12   36

M:TR105B E12
Mean 8.502
+/- 0.00081105
StdDev 0.13789
Points 28906

T1=21-OCT-2010 08:00:00

7   9

Morning Summaries Page 3

Column 1 Number_0_Pbar Transfer Shot #	Column 4 Number_3_Transfer Time		Column 21 Number_20_A:I BEAMB sampled on $91 (A:BEAM7), E10	Column 22 Number_21_A:I BEAMB sampled on $94 (A:BEAM9), E10	Unstacked (mA)	Column 23 Number_22_R: BEAMS (R:BEAME0[0]) pre xfer E10	Column 24 Number_23_R: BEAM (R:BEAME0[1]) post xfer, E10	Stashed	Acc to RR Eff	Acc to MI Eff	Acc to MI2 Eff	Acc to MI * Acc to MI2 Efficiency	Transfers	Sets	Column 5 Number_4_Acc Horizontal Emittance	Column 6 Number_5_Acc Vertical Emittance	Column 8 Number_7_Acc Longitudinal Emittance
	Totals =>				520.87			488.03	93.69%	96.15%	96.13%	92.43%	10	11	6.3565	5.8632	1.8039
	Daily Average =>				520.87			488.03					10	11			
21380	Friday, October 22, 2010	6:58	29.64	7.69	24.24	108.66	132.05	23.48	96.85%	98.13%	97.64%	95.82%		1	5.085	5.108	1.903
21379	Friday, October 22, 2010	5:45	112.73	6.61	111.55	6.49	109.00	103.41	92.71%	95.47%	95.12%	90.81%		1	7.251	6.106	1.691
21378	Friday, October 22, 2010	3:22	94.55	72.08	22.48	348.55	368.67	20.11	89.47%	93.35%	92.58%	86.43%		1	10.241	8.931	1.259
21377	Thursday, October 21, 2010	23:31	27.54	7.29	22.66	330.14	351.82	21.91	96.71%	98.24%	99.56%	97.81%		1	4.976	5.251	1.949
21376	Thursday, October 21, 2010	22:41	28.36	7.33	23.50	308.49	330.98	22.74	96.77%	97.65%	98.64%	96.32%		1	4.89	4.838	1.993
21375	Thursday, October 21, 2010	21:47	26.16	6.94	21.65	288.59	309.28	20.89	96.49%	98.44%	97.95%	96.42%		1	4.636	4.999	1.977
21374	Thursday, October 21, 2010	20:59	26.75	7.07	22.14	267.95	289.16	21.36	96.48%	97.95%	98.45%	96.44%		1	5.074	4.794	1.916
21373	Thursday, October 21, 2010	20:18	27.48	10.18	18.57	250.57	268.36	17.87	96.24%	98.55%	99.03%	97.59%		1	4.801	4.671	1.935
21372	Thursday, October 21, 2010	18:46	114.81	9.76	111.77	149.74	251.83	103.80	92.87%	95.68%	95.87%	91.73%		1	8.799	7.734	1.726
21371	Thursday, October 21, 2010	13:20	53.64	5.25	50.78	103.10	150.75	47.99	94.50%	96.42%	95.95%	92.52%	4	1	6.305	5.625	1.785
21370	Thursday, October 21, 2010	11:02	91.61	4.79	91.53	19.85	103.51	84.45	92.27%	95.18%	95.20%	90.61%	6	1	7.864	6.433	1.709

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	Totals =>				132.76			128.26	96.61%	98.14%	98.52%	96.70%	10	6	4.9103	4.9435	1.9455
	Daily Average =>				132.76			128.26					10	6			
21380	Friday, October 22, 2010	6:58	29.64	7.69	24.24	108.66	132.05	23.48	96.85%	98.13%	97.64%	95.82%		1	5.085	5.108	1.903
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21373	Thursday, October 21, 2010	20:18	27.48	10.18	18.57	250.57	268.36	17.87	96.24%	98.55%	99.03%	97.59%		1	4.801	4.671	1.935

The Weekly Plots

Pbar & Recycler Shift Plot (168.0 hrs.)

Thu Oct 21 15:49:50 2010

Pbar transfer problems

NuMI off for Target work

M18 Collimator Scans
GMPS regulator changeout
L:50 line cascade
Booster
F sector beam valve solenoid repair

Linac access
F sector access

H- source work

BRF7 watchdog trips and diagnosis

Booster access
Pre-vault access
Pbar vault access

KRF2 trip
RF off, Wathdog APG-B, calling expertt

A:IBEAM
R:BEAM

Fri Oct 15 08:00:00 CDT 2010 -- Fri Oct 22 08:00:00 CDT 2010

A:IBEAM   A:STCKRT   Hourly Rate   M:TOR109   A:PRDCTN   A:EMT3HN   A:EMT3VN
Ave Time between $81's

Acc to MI Efficiency
Average 98.3250

MI Efficiency
Average 99.4904

MI to RR Transfer Efficiency
Average 98.2590

Acc to RR Tran
Average 96.617

105.00
105.00
105.00
105.00

100.00
100.00
100.00
100.00

95.00
95.00
95.00
95.00

90.00
90.00
90.00
90.00

85.00
85.00
85.00
85.00

21238   21271   21304   21337   21371